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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,241	11/16/2005	Guldo Vendel	102132-27	3633
27388 7590 02/05/2008 NORRIS, MCLAUGHLIN & MARCUS 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022				
			EXAMINER BRANDT, CHRISTOPHER M	
			ART UNIT 2617	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/538,241

Applicant(s)

VENDEL ET AL.

Examiner

Christopher M. Brandt

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Action is in response to applicant's arguments filed on November 5, 2007. **Claims 21-32** are still pending in the present application. **This Action is made FINAL.**

Response to Arguments

Applicant's arguments filed November 5, 2007 have been fully considered but they are not persuasive.

The argued features, i.e., a method for detecting multiuser behavior on an aerial interface in GPRS and EGPRS mobile radio systems, comprising the steps of: acquiring and evaluating during a transmission of subscriber data on an aerial interface, additional information contained in subscriber data by a device on a network side and/or a subscriber side, both in the uplink and downlink; and identifying a number of parallel subscribers in used timeslots based on the additional information, read upon the cited references as follows.

Masseroni is discussing the establishment of a TBF uplink connection where the network requires to know the number of blocks that a mobile intends to transmit, where there is a downlink TBF buffer that is allocated to contain the RLC/MAC blocks to be sent. Therefore, Masseroni discloses the limitation, "acquiring and evaluating during a transmission of subscriber data on an aerial interface, additional information contained in subscriber data by a device on a network side and/or a subscriber side, both in the uplink and downlink." Masseroni showed enabling to unambiguously discriminate up to eight user sharing a time-slot but fails to specifically show identifying a number of parallel subscribers in used timeslots based on the additional information and was modified by Tong in order to show that it would have been

obvious to one of ordinary skill in the art to show the identifying a number of parallel subscribers in used timeslots based on the additional information.

With regard to applicant's argument that Masseroni in view of Tong fail to disclose "identifying a number of parallel subscribers in used timeslots based on the additional information," the examiner respectfully disagrees. As the applicant's have stated, Tong discloses "identifying a number of those user terminals for which the data in the HSD frame is intended." However, these frames are used timeslots because these high speed data (HSD) frames carries both voice and data communications (paragraph 71). In addition, Tong discloses that the first subframe is included within each frame to identify the user terminals and the corresponding data rates for each of the voice calls and/or data communications (paragraphs 72, 74). Moreover, Tong discloses that each voice user that is to be serviced by the superframe is identified. If these were not used timeslots, then Tong's system would not be able to service any user terminals.

With regard to applicant's argument that Tolli fails to disclose "comparing at the beginning of a Temporary Bit Flow (TBF) the number of the used Radio Link Control (RLC) blocs with an actually available and hence usable number of RLC blocks, and the identifying step comprises the step of identifying a number of parallel subscribers in used timeslots based on the additional information contained in the RLC blocks," the examiner respectfully disagrees. First of all, as stated in Masseroni, a RLC/MAC data block is identified to the TBF to which is associated through its own field where the identifier TFI is written. So, if one is comparing TBFs, they are essentially comparing the RLC/MAC blocks as disclosed in Masseroni. In addition, Tolli discloses monitoring (i.e. evaluating) the average experienced delay of the NRT

users as well as the number of TBF users (i.e. multiuser operation). The experienced delay of the NRT users is caused by the multiuser operation or many mobile stations using the system.

With regards to applicant's argument that Masseroni fails to disclose the use of these flags specifically for the detection of the number of parallel subscribers in used timeslots, the examiner respectfully disagrees. First of all, parallel subscribers in used timeslots was disclosed by Tong as pointed out above. Second of all, parallel subscribers was not further defined and the examiner read that as meaning identifying one or more user terminals in a HSD frame since a plurality of users can use a frame without causing interference (i.e. parallel since the HSD frame is organized to service multiple user terminals). Third of all, Masseroni discloses "evaluating parameters Uplink Status Flag (USF) and/or Temporary Flow Identifier (TFI) as additional information" because in paragraph 39, Masseroni teaches that when it detects the presence of a USF belonging to the set among those assigned to it, an action is taken (i.e. evaluating), which is to enable the uplink TBF.

With regard to applicant's argument that Masseroni fails to disclose, "determining for the duration of an uplink TBF, how many USF's are allocated by the network side", the examiner respectfully disagrees. Masseroni discloses that there is list of the allocated PDCH channels (time slots), and a corresponding USF value for each allocated channel (paragraph 38). Therefore, the network side knows the how many USF's are allocated because it has a corresponding list of the allocated time slots. In addition, Masseroni discloses that the TBF is kept alive only for the duration of the transfer so the USF value corresponds to the TBF.

With regards to applicant's argument that Masseroni fails to disclose, "determining for the duration of a downlink TBF, how many USF's are allocated by the network, side", the

examiner respectfully disagrees. Masseroni discloses that there is list of the allocated PDCH channels (time slots), and a corresponding USF value for each allocated channel (paragraph 38). Therefore, the network side knows the how many USF's are allocated because it has a corresponding list of the allocated time slots. In addition, Masseroni discloses that the TBF is kept alive only for the duration of the transfer so the USF value corresponds to the TBF. Moreover, Masseroni discloses that the header of each RLC/MAC block transmitted on a PDCH channel in "downlink" direction includes an additional field called USF, which is used by the network in the form of a flag to control the time division multiplexing of different mobile stations on a physical channel PDCH in uplink direction. Therefore, this procedure occurs for both uplink and downlink (paragraph 38).

With regard to applicant's argument that Masseroni fails to disclose "determining in a static allocation process," the examiner respectfully disagrees. Masseroni discloses in paragraph 36, that the MAC protocol has also procedures for a fixed allocation of resources. Therefore, although, Masseroni discloses dynamic allocation, Masseroni also teaches static (or fixed) allocation.

With regard to applicant's argument that Weigand fails to disclose counting the data frames, the examiner respectfully disagrees. Masseroni discloses the usage of the timeslots for the RLC blocks when Masseroni teaches that the second case of allocation is limited to a pre-set number of RLC blocks (paragraph 38). The examiner used the Weigand reference merely to show that counting data frames for various reasons is well known in the art. In addition, the examiner provided applicant's with a logical motivation to combine the references.

With regard to applicant's argument that Tolli fails to disclose wherein the acquiring and evaluating step comprises the step of evaluating for the entire lifetime of the respective uplink TBF and/or downlink TBF, the RLC data as well as the RLC/MAC control blocks for all TBF's in existence at that time and in all timeslots allocated to the respective TBF, and determining based on these data if a multiuser operation has occurred at the time of the data transmission, the examiner respectfully disagrees. First of all, as stated in Masseroni, a RLC/MAC data block is identified to the TBF to which is associated through its own field where the identifier TFI is written. So, if one is comparing TBFs, they are essentially comparing the RLC/MAC blocks as disclosed in Masseroni. In addition, Tolli discloses monitoring (i.e. evaluating) the average experienced delay of the NRT users as well as the number of TBF users (i.e. multiuser operation). The experienced delay of the NRT users is caused by the multiuser operation or many mobile stations using the system.

As a result, the argued features are written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21, 23-26, 29-32 are rejected under 35 USC 103(a) as being unpatentable over **Masseroni et al. (EP 1 257 096 A2, hereinafter Masseroni)** in view of **Tong et al. (US PG PUB 2003/0123414 A1, hereinafter Tong)**.

Consider **claim 21 (and similarly applied to claim 29)**. Masseroni discloses a method for detecting multiuser behavior on an aerial interface in GPRS and EGPRS mobile radio systems (figures 14 and 15, abstract, paragraph 36), comprising the steps of

acquiring and evaluating during a transmission of subscriber data on an aerial interface, additional information contained in subscriber data by a device on a network side and/or a subscriber side, both in the uplink and downlink (figures 14-24, paragraphs 36-38, read as the establishment of a TBF uplink connection where the network requires to know the number of blocks that a MS mobile intends to transmit. In addition, in the download TBF a buffer is allocated to contain the RLC/MAC blocks to be sent); and

enabling to unambiguously discriminate up to eight users sharing a time-slot (paragraphs 38, 49, read as three bits are foreseen for the USF field that enable to unambiguously discriminate up to eight users sharing a time-slot. In addition, figure 9a illustrates a situation in which three MS mobiles identified by a same number of connections TBF1, TBF2, and TBF3 share the radio resource assigned to the GPRS service).

Masseroni substantially discloses the claimed invention but fails to disclose identifying a number of parallel subscribers in used timeslots based on the additional information (Masseroni discloses enabling to unambiguously discriminate up to eight users sharing a time-slot (paragraphs 38, 49)).

However, Tong discloses identifying a number of parallel subscribers in used timeslots based on the additional information (paragraphs 19, 20, 57, and 72, read as a plurality of bits to identify one or more user terminals for which the data in the HSD frame is intended).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Tong into the invention of Masseroni in order to reduce the encoding so that the user terminals can easily interpret them (paragraph 19).

Consider **claim 23 and as applied to claim 21**. Masseroni and Tong disclose wherein the acquiring and evaluating step comprises the step of evaluating parameters Uplink Status Flag (USF) and/or Temporary Flow Identifier (TFI) as additional information (Masseroni; paragraph 38).

Consider **claim 24 and as applied to claim 23**. Masseroni and Tong disclose wherein the acquiring and evaluating step further comprises the step of determining for the duration of an

uplink TBF, how many USF's are allocated by the network side (figures 15, 17, and 22b, paragraphs 68, 72, 73, 93, 94).

Consider **claim 25 and as applied to claim 23**. Masseroni and Tong disclose wherein the acquiring and evaluating step further comprises the step of determining for the duration of a downlink TBF, how many USF's are allocated by the network side (figures 15, 17, and 22b, paragraphs 68, 72, 73, 93, 94).

Consider **claim 26 and as applied to claim 23**. Masseroni and Tong disclose wherein the acquiring and evaluating step further comprises the step of identifying the USF's and/or TFI's and for each TBF and a combination of all TBF's which are part of the transfer (figures 15-17, paragraphs 69-71).

Consider **claim 30 and as applied to claim 29**. Masseroni and Tong disclose wherein the at least one device is provided in the Packet Control Unit PCU (8) (figures 13, 14, paragraphs 64-66, 74).

Consider **claim 31 and as applied to claim 29**. Masseroni and Tong disclose wherein the at least one device comprises a subscriber-side measurement system, which cooperates with or is integrated in a mobile radio terminal (figures 15-17, paragraph 68).

Consider **claim 32 and as applied to claim 29**. Masseroni and Tong disclose wherein the additional information comprises the parameters USF and/or TFI (paragraph 38).

Claims 22 and 28 is rejected under 35 USC 103(a) as being unpatentable over Masseroni et al. (EP 1 257 096 A2, hereinafter Masseroni) in view of Tong et al. (US PGPUB 2003/0123414 A1, hereinafter Tong) and further in view of Tolle (US PGPUB 2006/0014544 A1).

Consider **claim 22 and as applied to claim 21**. Masseroni and Tong disclose the claimed invention except wherein the acquiring and evaluating step comprises the steps of comparing at the beginning of a Temporary Bit Flow (TBF) the number of the used Radio Link Control (RLC) blocks with an actually available and hence usable number of RLC blocks, and the identifying step comprises the step of identifying the number of parallel subscribers in the used timeslots based on the additional information contained in the RLC blocks.

However, Tolli discloses wherein the acquiring and evaluating step comprises the steps of comparing at the beginning of a Temporary Bit Flow (TBF) the number of the used Radio Link Control (RLC) blocks with an actually available and hence usable number of RLC blocks, and the identifying step comprises the step of identifying the number of parallel subscribers in the used timeslots based on the additional information contained in the RLC blocks (paragraph 36, read as the monitoring and the parameter can be base on measuring the number of reserved TBFs compared to the total number of TBFs or number of TBF users in GPRS-based systems).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Tolli into the invention of Masseroni and Tong in order to be able to trigger users to perform cell reselection if a cell load parameter exceeds a pre-set cell load threshold (abstract).

Consider **claim 28 and as applied to claim 21**. Masseroni and Tong disclose the claimed invention except wherein the acquiring and evaluating step comprises the step of evaluating for the entire lifetime of the respective uplink TBF and/or downlink TBF, the RLC data as well as the RLC/MAC control blocks for all TBF's in existence at that time and in all

timeslots allocated to the respective TBF, and determining based on these data if a multiuser operation has occurred at the time of the data transmission.

However, Tolli discloses wherein the acquiring and evaluating step comprises the step of evaluating for the entire lifetime of the respective uplink TBF and/or downlink TBF, the RLC data as well as the RLC/MAC control blocks for all TBF's in existence at that time and in all timeslots allocated to the respective TBF, and determining based on these data if a multiuser operation has occurred at the time of the data transmission (paragraph 36, read as the monitoring and the parameter can be base on measuring the number of reserved TBFs compared to the total number of TBFs or number of TBF users in GPRS-based systems).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Tolli into the invention of Masseroni and Tong in order to be able to trigger users to perform cell reselection if a cell load parameter exceeds a pre-set cell load threshold (abstract).

Claim 27 is rejected under 35 USC 103(a) as being unpatentable over **Masseroni et al. (EP 1 257 096 A2, hereinafter Masseroni)** in view of **Tong et al. (US PGPUB 2003/0123414 A1, hereinafter Tong)** in view of **Tolli (US PGPUB 2006/0014544 A1)** and further in view of **Weigand (US Patent 6,963,554 B1)**.

Consider **claim 27 and as applied to claim 22**. Masseroni, Tong, and Tolli disclose the wherein the acquiring and evaluating step further comprises the step of determining, in a static allocation process, the usage of the timeslots for the RLC blocks (Masseroni; paragraph 38)

However, Masseroni and Tong fail to disclose that this determination is based on counting the data frames.

However, Weigand discloses that this determination is based on counting the data frames (column 16 lines 55-60, read as the frame tick count register can correspond to a predetermined offset to the end of the frame).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Weigand into the invention of Masseroni and Tong in order to allow time for the base station to be able to maintain timing for the system so that it can detect the end of a frame (column 16 lines 61-67).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Hand-delivered responses should be brought to

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Randolph Building
401 Dulany Street

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.



Christopher M. Brandt

C.M.B./cmb

February 1, 2008



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
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